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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/083,473	02/27/2002	Fumihiko Okai	381AS/50959	4774

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EXAMINER

ALSOMIRI, ISAM A

ART UNIT	PAPER NUMBER
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3662

DATE MAILED: 01/08/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/083,473

Applicant(s)

OKAI ET AL.

Examiner

Isam A Alsomiri

Art Unit

3662

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 February 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) 4, 11, 12 and 14-16 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-10, 13 and 17-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 3662

DETAILED ACTION

Election/Restrictions

Applicant's election of group I (Claims 1-3, 5-10, 13 and 17-19) in Paper No. 3 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 5 and 10 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. **Regarding claim 5**, the disclosure does not show or explain how the claimed "outputting said level outside" is performed.

Regarding claim 10, the disclosure does not show or explain the method of notifying the driver that the notifying means has been changed.

Claims 5 and 10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. **Regarding claim 5**, it is not clear what is meant by the claim limitation “outputting said level outside”.

Regarding claim 10, it is not clear what is meant by the claim limitation changing the method of notification. For examining purposes, I will consider the limitation as notifying the driver of changes in the system.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1,2, 5-10 and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Shirai et al. Referring to **claim 1**, Shirai discloses in figures 1-4 detecting targets in the field of view and measuring the distance and the speed of the target, which reads on the claimed obstruction detection means (see Abstract), performing vehicle control, detecting detection performance (see col. 31 lines 15-29), it is inherent that the system does two or more controls (see figure 1_20a, 18a and 16), controlling stop operation in accordance with the performance (see col. 31 lines 15-29).

Referring to claim 2, Shirai teaches notifying an operation stopped state to a driver (see col. 31 lines 25-27).

Referring to claim 5, Shirai discloses in figures 1-4 detecting targets in the field of view and measuring the distance and the speed of the target, which reads on the claimed obstruction detection means (see Abstract), it is inherent that Shirai's system includes classifying the detection performance into a plurality of level, either working properly or not (see col. 31 lines 15-29).

Referring to claims 6-7, and 10, Shirai discloses in figures 1-4 detecting targets in the field of view and measuring the distance and the speed of the target, which reads on the claimed acquiring a speed and obstruction detection means (see Abstract), notifying information to the driver concerning headway distance (see figure 1_14c), it is inherent that the traveling control is performed on the basis of the speed and distance of the target (see Abstract), judging detection performance (see col. 31 lines 15-29), furthermore, it is inherent that the notification will be changed when the system performance is different, Shirai teaches advising the driver that the system control unit has changed because of the performance, which in part include the claimed (claim 10) method of the notification by the notifying means has been changed.

Referring to claims 8 and 9, Shirai teaches canceling the intervehicle distance control and advising the driver that it has been canceled, which reads on the claimed canceling the traveling control and notifying the driver (see col. 31 lines 15-27).

Referring to claim 18, it is inherent that Shirai's system includes classifying the detection performance into a plurality of level, either working properly or not (see col. 31 lines 15-29).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3, 13, 17, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shirai et al. in view of Morikawa et al. Referring to claim 3, Shirai discloses in figures 1-4 detecting targets in the field of view and measuring the distance and the speed of the target, which reads on the claimed acquiring a speed and obstruction detection means, identifying a moving object (see Abstract). Shirai does not teach calculating an RCS value and detecting the detection performance based on a statistical processing of the RCS value, Morikawa teaches determining a decreased ability to measure the distance to the obstacle when the distance limit is smaller than the given reference value, which inherent performed by calculating the an RCS value, and it is also inherent that the RCS value is processed statistically (see col.1 lines 51-55). It would have been obvious to modify Shirai's system to calculate the RCS value and determined the performance of the system to accurately determine when the system performance has decreased.

Referring to claim 13, Shirai does not teach calculating an RCS value on the basis of the speed of the vehicle and comparing it with a predetermined value to thereby judge detection performance, Morikawa teaches judging detection performance by comparing the calculated

Art Unit: 3662

distance limit with a reference value or a predetermined value, it is inherent that the distance limit is also a function of the speed or the relative speed, therefore it reads on the claimed on the bases of the speed of the vehicle (see col. 1 lines 51-60). It would have been obvious to modify Shirai's system to calculate the RCS value and determined the performance of the system to accurately determine when the system performance has decreased.

Referring to claim 17, Shirai does not teach setting an initial value and calculating a current value of a distance at which the obstruction approaching to the vehicle begins to be detected or missed, and comparing the initial and the calculated values to thereby judge the detection performance. Morikawa teaches judging the detection performance by comparing an initial value or reference value with a calculated value, wherein the calculated value is determined by calculating the distance limit of the preceding vehicle determined by the distance determining means immediately when the preceding vehicle has entered the obstacle detectable zone, furthermore, it is inherent that the initial value is calculated in a similar method when the system is normal (see col. 1 line 51 to col. 2 lines 6). It would have been obvious to modify Shirai's system to compare an initial value at normal performance with a calculated value of the performance level to determine the current performance of the system for better accuracy and a more reliable system.

Referring to claim 19, Shirai does not teach using a millimeter-wave radar, however, using millimeter-wave radar is known to those skilled in the art. Therefore, it would have been obvious to modify Shirai's system to use a millimeter-wave radar to cut cost and to suppress noises and because it is known to those skilled in the art.

Art Unit: 3662

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The cited prior art to (Ashihara et al., Ashihara US-6,369,747, Ashihara US-6,414,623, Lajines et al.) show various vehicle control systems.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Isam A Alsomiri whose telephone number is 703-305-5702. The examiner can normally be reached on Monday-Thursday and every other Friday (8:30-5:00).

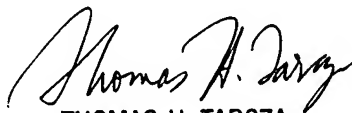
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas H Tarcza can be reached on 703-306-4171. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9326 for regular communications and 703-872-9327 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1113.

Isam Alsomiri



December 29, 2002



THOMAS H. TARCZA
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